	OFFICE OF DRINKING WATER AND MUNICIPAL ASSISTANCE POLICY AND PROCEDURE		DEPARTMENT OF ENVIRONMENTAL QUALITY
Original Effective Date: Unknown	Subject: Minimum Isolation Distances: Private and Public Water Wells		Category:  <input type="checkbox"/> Internal/Administrative  <input type="checkbox"/> External/Noninterpretive  <input checked="" type="checkbox"/> External/Interpretive
Revised Date: November 2003	Division/Office and Program Names: ODWMA-Well Construction Program		
Reformatted Date: March 28, 2013	Number: ODWMA-368-127-011	Page: 1 of 7	

*A Department of Environmental Quality (DEQ) Policy and Procedure cannot establish regulatory requirements for parties outside of the DEQ. This document provides direction to DEQ staff regarding the implementation of rules and laws administered by the DEQ. It is merely explanatory; does not affect the rights of, or procedures and practices available to, the public; and does not have the force and effect of law.*

## INTRODUCTION, PURPOSE, OR ISSUE:

Michigan law requires that certain minimum isolation distances be maintained when constructing a new water well (private or public) near a potential contamination source. The actual location of the well will often be determined by factors other than sources of contamination or geologic conditions. Land surface features such as steep slopes and poorly drained areas are considerations in the location of the well. Whenever possible, wells should be located at higher elevations than the surrounding areas to decrease the potential for contamination.

In general, minimum isolation distances should not be the standard. In some cases, for example a well installation near a groundwater contamination site, the isolation distance should be maximized to provide the well owner with the best possible chance of maintaining a safe water supply.

For Private and Type III and Type II Public Water Supplies, local health departments (LHD) have the authority to increase isolation distance based on various factors such as groundwater conditions or contamination sources. LHDs also have the authority to decrease the isolation distance from a well to a potential source of contamination through the use of deviations. Deviations are issued on a case-by-case basis, and maintaining public health protection is essential. Criteria for issuance of deviations are set forth in R 325.1613 of the Groundwater Quality Control Rules and R 325.10809 of the Act 399 Rules.

## AUTHORITY:

Part 127, Water Supply and Sewer Systems, of the Public Health Code, 1978 PA 368, as amended (Act 368), and R 325.1613 of the Groundwater Quality Control Rules promulgated pursuant to Part 127

Safe Drinking Water Act, 1976 PA 399, as amended (Act 399)

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**DEFINITION:**

Deviation: a reduction in isolation between the well and a source of contamination, granted in writing by the LHD.

**POLICY:**

The following lists sources of contamination and the well isolation distances required from those sources by state codes. The DEQ and LHDs have authority to issue deviations from these minimum isolation distances on a case-by-case basis. Criteria for issuance of deviations are set forth in R 325.1613 and R 325.10809.

\* = For the isolation distances marked with a single asterisk, the isolation distance is for a source of contamination which is not specifically listed in the rules. However, the source of contamination is interpreted as belonging in a general contamination source group (example - a sewage holding tank is the same as a septic tank) which is listed in the rules and, therefore, the isolation distance listed in this document is required.

\*\* = For the isolation distances marked with a double asterisk, the isolation distance is from a source of contamination which is not specifically named in the rules. However, the DEQ has established a recommended isolation distance based on the contaminant involved, the risk to public health, and other factors. Under the general authority of an LHD Health Officer's responsibility to protect public health, a Health Officer may modify this recommended isolation distance, either increasing or decreasing it, on a case-by-case basis.

REQUIRED MINIMUM ISOLATION DISTANCE (FEET)			
Contamination Source	Part 127 of Act 368	Act 399	
		IIb and III	I and IIa
Agricultural chemical/fertilizer storage or preparation area	150	800	2000
Animal/poultry yard	50	75	200
Brine wells/injection wells	**150	**800	**2,000
Building or projection thereof	3	3	3
Cemetery/graves	**50	*75	*200
Cesspool	50	75	200



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Contamination Source	Part 127 of Act 368	Act 399	
		IIb and III	I and IIa
Chemical Storage	150	800	2,000
Contaminant plumes (Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended [Act 451])	**150	**800	**2,000
Contaminant plumes (Part 213, Leaking Underground Storage Tanks, of Act 451, or LUST sites)	**150	**800	**2,000
Drainfield	50	75	200
Drywell	50	75	200
Footing Drains	10	10	10
Fuel/chemical storage tanks – Underground or above grade and associated piping			
depot/tank farm	300	800	2,000
1,100 gal. or larger, without secondary containment	300	800	2,000
1,100 gal. or larger, with secondary containment	50	800	2,000
less than 1,100 gal. which store motor or heating fuel for noncommercial purpose or consumptive use on premises where fuel is stored	50	800	2,000
less than 1,100 gal. which store motor fuel for commercial purpose	*50	800	2,000
located in a basement, regardless of size	*50	800	2,000
Grease trap	50	*75	*200
Kennels	50	*75	*200

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Contamination Source	Part 127 of Act 368	Act 399	
		IIb and III	I and IIa
Landfill or dump sites (active or inactive)	800	800	2,000
Liquid Petroleum (LP) tanks (See Comments on page 6)			
Liquid waste draining into the soil	50	*75	200
Metering station for pipelines	*300	*300	*300
Municipal wastewater effluent or sludge disposal area (land surface application or subsurface injection)	300	800	2,000
Oil or gas wells	300	300	300
Other wastewater handling or disposal unit	50	*75	*200
Petroleum product processing or bulk storage	300	800	2,000
Pipelines			
gas, oil, etc.	*300	*300	*300
natural gas (See Comments on page 6)			
Privy/outhouse	50	75	200
Seepage pit	50	75	200
Septage waste (land application area)	800	800	2,000
Septic tank	50	*75	*200
Sewage lagoon serving a single family dwelling	50	75	200

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		IIb and III	I and IIa
Sewage lagoon effluent – land application area	50	800	2,000
Sewage or liquid waste draining into soil	50	*75	*200
Sewage pump chamber, transfer station, or lift station	50	75	200
<b>Sewers</b>			
Buried gravity sewer (sanitary or storm) - Service weight or heavier ductile-iron or cast iron, or schedule 40 PVC, all with watertight joints	10	75	200
Buried pressure sewer (sanitary or storm) watertight joints (pressure tested after installation to 100 psi), equivalent to Schedule 40 or SDR 21, and meets or exceeds ASTM Specifications D1785-91 or D2241-89	10 (by written deviation only)	75	200
Buried gravity or pressure sewer (sanitary or storm), constructed of materials not meeting the specifications listed in the two categories above, or the materials are unknown	50	75	200
<b>Sump pit</b>			
Receiving other than household waste (footing drain, roof drain, etc.)	10	10	10
Receiving household waste (laundry, softener backwash, sink waste, etc.)	50	75	200
Surface water (lake, river, stream, pond, ditch, etc.)	10	75	200



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Contamination Source	Part 127 of Act 368	Act 399	
		IIb and III	I and IIa
Unfilled space below ground surface (except an approved basement, basement offset, or crawl space beneath single family dwelling)	10	10	10

**Comments:**

Natural gas and liquid petroleum (LP) are not considered sources of ground water contamination because of the volatile gas nature of the fuels. If leaks occur, the gases escape into the atmosphere. Leaked gases do not migrate downward into the soil. Wells should be sufficiently isolated from natural gas lines or LP tanks to minimize the potential for damage to the lines or tanks during well construction or repair, trenching of water lines, etc., and to allow accessibility to the well.

To address the concerns regarding locating new manure, fuel, and chemical storage structures within the isolation area of existing wells on farms, a protocol, "Criteria for Reducing the 800-Foot Minimum Well Isolation Distance for Major Sources of Contamination Without Secondary Containment," was developed by the DEQ to construct certain facilities on farms within the 800-foot isolation area of Type IIB and Type III Public Water Supplies. The protocol was developed to address this need and has been incorporated by the Natural Resources Conservation Service into their agency's process for evaluating and funding relevant farm construction projects. The DEQ believes the protocol facilitates improvements on farms and protects the farm drinking water supplies. While the intent of the protocol is to locate major sources of contamination with reduced isolation to existing water wells, it may be used to assist the LHD where the consideration of deviations for new construction is necessary.

**PROCEDURES:**

WHO	DOES WHAT
LHD staff	Consider the minimum isolation distance requirements when issuing well construction permits, reviewing water well records, and conducting well final inspections.
LHD staff	Issue written deviations to reduce the minimum isolation distance requirements while still protecting public health.
Registered Water Well Drilling Contractor	Drill water wells that meet the minimum isolation requirements in Part 127 or as documented in a written deviation.

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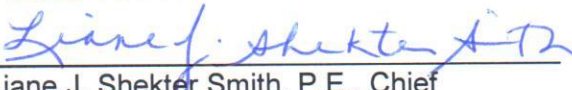
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**REFERENCES:**

"Criteria for Reducing the 800-Foot Minimum Well Isolation Distance for Major Sources of Contamination Without Secondary Containment"

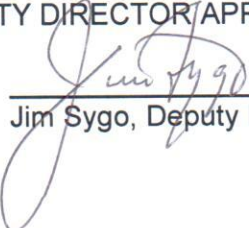
*Compliance with Part 127 shall be based on the statute and rules promulgated under Part 127. Nothing in this policy and procedure shall be used in an enforcement action brought against a Registered Water Well Drilling Contractor or Pump Installer. This policy and procedure shall expire on December 31, 2014, unless superseded before that date.*

**OFFICE CHIEF APPROVAL:**

  
\_\_\_\_\_  
Liane J. Shekter Smith, P.E., Chief  
Office of Drinking Water and Municipal Assistance

3/15/2013  
Date

**DEPUTY DIRECTOR APPROVAL:**

  
\_\_\_\_\_  
Jim Sygo, Deputy Director

3/28/2013  
Date